IN THE UNITED STATES DISTRICT COURT EASTERN DISTRICT OF VIRGINIA Richmond Division

| E. I. du Pont de Nemours and Company |) | |
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| |) | |
| |) | |
| Plaintiff, |) | Civil Action No. 3:09CV58 |
| v. |) | |
| |) | |
| Kolon Industries, Inc. |) | JURY TRIAL DEMANDED |
| |) | |
| |) | |
| Defendant and Third-Party Plaintiff. |) | |
| | | |

KOLON INDUSTRIES, INC.'S SECOND AMENDED COUNTERCLAIM

Defendant Kolon Industries, Inc. ("Kolon") brings this Amended Counterclaim under Sherman Act Section 2 and Clayton Act Section 16 for monopolization of the para-aramid fiber market, alleging as follows:

I. THE PARTIES

- 1. Kolon is a South Korean company that designs, manufacturers, and sells paraaramid fibers worldwide including the United States in interstate commerce.
- 2. E. I. du Pont de Nemours and Company ("DuPont") is a Delaware corporation with its principal place of business in Wilmington, Delaware. DuPont designs, manufactures, and sells Kevlar, a competing para-aramid fiber, in interstate commerce.

II. JURISDICTION AND VENUE

- 3. Kolon brings this amended counterclaim under Section 16 of the Clayton Act, 15 U.S.C. § 26, to prevent and restrain violations of Section 2 of the Sherman Act. This Court has federal question subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1337.
- 4. Venue in the United States District Court for the Eastern District of Virginia is proper under 28 U.S.C. § 1391. Venue is proper in this Division pursuant to Local Rule 3(C). DuPont is a corporation that transacts business within this judicial district and Division. The acts complained of have had, and will have, substantial anticompetitive effects in the Eastern District of Virginia.

III. DUPONT'S MONOPOLIZATION OF THE PARA-ARAMID FIBER MARKET

A. PARA-ARAMID FIBERS

5. Aramid fibers ("aramids") are a type of strong synthetic fiber which has been developed for commercial uses. The U.S. Federal Trade Commission defines aramid fibers as:

A manufactured fiber in which the fiber forming substance is a long-chain synthetic polyamide in which at least 85% of the amide (-CO-NH-) linkages are attached directly between two aromatic rings.

Aramids are generally prepared by either solution or interfacial polycondensation, which is essentially a chemical condensation leading to the creation of a polymer. In the case of aramids, this is generally done with the meta- and para- substituted diacid chlorides and/or diamines. Kolon's Heracron, DuPont's Kevlar and Teijin Ltd.'s Twaron products are generally referred to as "para-aramids."

6. Para-aramids have chain molecules that are highly oriented along the fiber axis, creating a strong chemical bond which helps give the fiber its beneficial characteristics – no

melting point, low flammability, strong fabric integrity at elevated temperatures, good resistance to abrasion and organic solvents, non-conductivity, and great strength-to-weight properties.

- 7. Para-aramids are used in a variety of end-uses including aerospace and military applications; ballistic-rated body armor fabric; as an asbestos substitute in various applications, including automotive parts; mechanical rubber goods; fiber optics; composite materials; tires; ropes and cables; reinforced thermoplastic pipes; and sporting goods, among others.
- 8. Producing para-aramid fiber is costly, time consuming, and difficult. Thus, globally, only a handful of firms effectively meet fiber industry standards for commercial use, while maintaining production efficiency. Patents for manufacturing para-aramid are generally disclosed. The global producers that manufacture marketable para-aramids are:
- a. <u>DuPont</u> began selling and marketing the first para-aramid in 1972, first under the name Fibre B, and eventually as Kevlar. For a period of time, DuPont was effectively the only producer of para-aramids worldwide.
- b. <u>Teijin</u> is the combination of two original manufacturers: AKZO, a division of the Dutch firm Acordis, which first began investigating aramid fibers in 1970, and Teijin, the Japanese firm which first entered the aramid fiber market in 1987. After discovering an alternative method of creating para-aramid fibers, AKZO was involved in a lengthy patent war with DuPont. In 1988, DuPont signed an agreement with AKZO, making the international para-aramid fiber market available to both firms. AKZO marketed its para-aramid product under the name Twaron. In 2000, Teijin purchased AKZO, and its Twaron brand name.

- c. <u>Kolon</u> began producing para-aramid fibers under the brand name Heracron in 2006. The product had been in development since 1979. Kolon produces its para-aramid fiber in the Republic of Korea and imports it into the United States.
- d. <u>Kamenskvolokno</u> is a Russian synthetic fiber manufacturer producing under the brand names CBM, Pycap, Apmoc, APYC and Artec. It first began producing paraaramid fibers in 2003. Kamenskvolokno does not supply para-aramid fiber to U.S. customers or compete in the United States.
- e. <u>Yenta Spandex</u> is a leading para-aramid fiber producer in China. The company announced plans to make para-aramid fiber its primary focus. Yenta Spandex does not supply para-aramid fiber to U.S. customers or compete in the United States.
- 9. Industry experts estimate that the aramid fiber industry will be worth \$5.1 billion in 2012. The panoply of valuable uses for para-aramids has led to an unprecedented increase in demand, yet supply remains low and prices high.

B. DUPONT'S MARKET POWER

10. The original patent for the production of aramid fiber was granted in 1973.

DuPont applied for and was granted a patent on an air gap spinning process using a HMPT/NMP solvent, at the time the only way to make the fiber suitable for commercial production (the "Blair/Morgan Patent"). Because of previously existing patents in the fiber industry (a Monsanto patent, in particular), however, it was impossible for DuPont to completely block others from entering the industry.

- 11. During this same period, AKZO, a division of Acordis, began investigating aramid fibers, having learned of them via the Blair/Morgan Patent. In 1973, AKZO found an alternative solvent by which to make aramid fibers. Soon after, the HMPT solvent used in DuPont's production process was deemed carcinogenic, and in 1979 it was discovered that the AKZO fiber had better heat resistance. AKZO attempted to patent its solvent, and entered into negotiations with DuPont by which both firms could produce para-aramid fibers internationally. DuPont balked at this idea, tried to block AKZO's patent application, and a well documented patent war ensued. In 1986, DuPont successfully sought and obtained a ban against imports of AKZO's para-aramid fiber in the United States.
- 12. From 1970-1980, a number of companies withdrew from para-aramid fiber projects. One of the main reasons for this decline in development was a growing fear that DuPont, who made it clear they were not prepared to tolerate any competition to Kevlar, would intervene and cause significant hardship and cost to companies attempting to enter the industry. Since the patent itself was not strong, DuPont could be said to have engaged in patent disputes in order to deter or delay entry into the U.S. market for para-aramid fiber.
- 13. In 1988, courts in the UK, Germany and the Netherlands ruled to ban DuPont's Kevlar para-aramid fiber from these EU markets, although AKZO never enforced these bans. DuPont, which had just built a \$60 million plant in Ireland and did not want to lose its investment, was forced to sign an agreement with AKZO, opening up the international para-aramid fiber market to both firms. This dispute lasted for nearly a decade. Others in the industry that had begun investigating para-aramid fiber were scared off, and ultimately were deterred from entry by DuPont.

- 14. Once the patent dispute was resolved by agreement and DuPont's patent on Kevlar had expired, AKZO was expected to compete vigorously in the United States. DuPont, however, brought an antidumping case against imports of para-aramid fiber, specifically PPD-T aramid fiber from The Netherlands, in 1993. The U.S. International Trade Commission ("ITC") entered an order in 1994 imposing 67% duties on imports of aramid fiber. At the time, only AKZO and DuPont commercially sold para-aramid fiber. The imposition of import duties on imports from AKZO resulted in a lessening of competition in the United States market for para-aramid fiber. AKZO primarily focused on its European market although it continued to maintain a significant presence in the U.S., but at higher overall market prices due to the imposition of import duties.
- 15. Thus, for nearly three decades DuPont enjoyed an acknowledged monopoly in the United States, the world's largest market for para-aramid fiber. And DuPont's Kevlar with AKZO's (then Teijin's) Twaron held a global duopoly.
- 16. In a 2001 "Sunset" proceeding, the ITC determined that continuation of antidumping duties on aramid fiber from The Netherlands likely would not lead to a continuation of material injury to the domestic industry (i.e., DuPont) within a reasonably foreseeable time. In this proceeding, DuPont argued that "without an acceptable level of profitability, DuPont's position in the aramid fiber market is threatened, and our potential for investment and continued growth in the market is limited." The ITC cited a global shortage of aramid fiber with expected demand increases as justification for sunsetting the duties on aramid fiber imports. The ITC found that although the United States is the world's largest market for aramid fiber, prices in the United States were higher than any other market. And the lack of excess capacity by Teijin in

The Netherlands and Teijin's struggle to satisfy existing customers made it unlikely that it could enter the U.S. market quickly, even if the antidumping duties were revoked.

17. DuPont possesses substantial market power and enjoys substantial profit margins in the para-aramid fiber market. DuPont's substantial market power has been protected over the years by para-aramid fiber patents, trade barriers, legislative protections, and other high barriers to entry in the relevant market. DuPont's substantial market power is evidenced by its historic market shares, a shortage of U.S. supply and high U.S. prices for Kevlar. Upon information and belief, DuPont's market share remains greater than 70% of all sales by purchase volume of para-aramid fiber in the United States.

C. RELEVANT PRODUCT AND GEOGRAPHIC MARKETS

- 18. The relevant product market is the market for para-aramid fibers. Light weight flexibility, heat resistance, and strength are defining characteristics of para-aramids, which by virtue of these unique characteristics are a specialty fiber. For many applications, there are no competing materials available that downstream producers will design into their products. Para-aramid manufacturers like DuPont refer to these applications as "sustainable" for this very reason lack of any viable substitute material.
- 19. There are no synthetic fibers that are reasonably interchangeable with para-aramid fibers for "sustainable" end uses. Although meta-aramid fibers share structural similarities with para-aramid fibers, they are functionally distinct. Para-aramids, such as Kevlar, Twaron and Heracron, provide high to very high tenacity, medium to very high modulus, and very low to low elongation. In contrast, meta-aramids, which are produced using different equipment and a different process, have low tenacity and modulus and high elongation. Para-aramids also have

better strength-to-weight ratios, and are therefore used more effectively in protective applications. Thus, the two types of aramid fibers support different end-use applications.

- 20. Additionally, Kolon's major competitors DuPont and Teijin market paraaramids and meta-aramids as separate products under different brand names for different applications. For example, DuPont markets its para-aramid as Kevlar and its meta-aramid as Nomex. Producers of para-aramid and meta-aramid fibers view these aramid fibers as separate products rather than as substitutes.
- 21. Purchasers also do not view meta-aramid or other synthetic fibers as substitutes for para-aramid fibers. Particular synthetic fibers may share structural similarities with para-aramids, such as meta-aramids, polyethylene fibers, zylon fibers, carbon fibers, PVA fibers and cellulose fibers. But any structural similarities are not sufficient to make these products "interchangeable." These synthetic fibers lack the versatility in characteristics of para-aramids and may not be available in commercial quantities necessary to discipline a small but significant non-transitory price increase in para-aramid fiber. Simply put, these synthetic fibers are not viable substitutes and are not reasonably interchangeable with para-aramid fibers. Thus, a small but significant non-transitory increase in the price of para-aramid fibers would not cause customers to switch to other types of synthetic fibers.
- 22. In addition to the functional constraints to substitution for "sustainable" applications, there are significant economic constraints unique to the para-aramid industry, even for "unsustainable" applications assuming alternative materials in sufficient supply are available. At the design stage, para-aramid fibers may compete with other alternative fibers to be designed into certain "unsustainable" end uses. But once para-aramid fibers are selected and worked into

the design, it would take a year or longer to re-design the downstream product with an available substitute for the "unsustainable" end-use to avoid a small but significant, non-transitory price increase. The cost of redesign would be substantial.

- 23. Accordingly, the development, manufacture and sale of para-aramid fiber is a separate and distinct product market for all "sustainable" applications and all "unsustainable" applications once incorporated into a design.
- 24. The relevant geographic market is worldwide supply of para-aramid fiber to commercial purchasers in the United States. The geographic market includes foreign supply practicably available to U.S. commercial purchasers, but the extent and nature of that supply is not known and will have to be determined on a factual record. Competition for U.S. commercial para-aramid buyers occurs in the United States where the buyers are located. Many U.S. buyers require particular qualification analysis and tests for their specific commercial uses. And prices in the United States are distinct from other nations. There are only five global producers of paraaramid fiber. DuPont is the only domestic producer. Teijin is the only other supplier to U.S. commercial customers, but the amount of its supply and shipments to the United States for commercial use are not known. Its capacity to divert production for supply to United States commercial customers also is not known. Accordingly, the extent of its production that should be included in market definition and market share calculations must be left for factual determination. Kolon is the only other manufacturer that supplies commercial customers in the United States, and its sales to date are de minimis. Kamenskvolokno and Yenta Spandex do not supply commercial customers or otherwise ship para-aramid fiber into the United States.

- D. THERE ARE HIGH TECHNOLOGICAL AND LEGISLATIVE BARRIERS TO ENTRY IN THE U.S. PARA-ARAMID FIBER MARKET
- 25. The para-aramid fiber industry is a highly concentrated market, dominated by DuPont and Teijin, with only a few alternative suppliers such as Kolon. The main reasons for the lack of competition in this market are the large barriers to entry that exist in the para-aramid fiber industry, and the entry deterrence practiced by DuPont.
- 26. Potential entrants to the para-aramid market face significant technological barriers as well as a unique legislative barrier to entry. The production of para-aramid fibers requires sophisticated technology and a very large investment in capital to build a plant and develop product applications. To provide the degree of price competition needed to challenge DuPont, entrants would have to reach a scale sufficient to achieve production costs comparable to DuPont. This would require significant investment, particularly in specialized equipment dedicated to para-aramid fiber production, and is unlikely to occur.
- 27. Para-aramid manufacturers also face legislative barriers to entering the United States para-aramid market. The Berry Amendment to the Buy American Act generally prevents international firms from providing para-aramid fiber to the U.S. Department of Defense. This protective legislation is a significant entry barrier, since it bars a large purchaser of para-aramid fiber products from international supply. The only way to surmount this barrier to entry is to open U.S. manufacturing operations or obtain an official waiver, which involves a lengthy process of petitioning members of Congress. After a high profile political battle where Senator John McCain repeatedly cited DuPont's U.S. Kevlar monopoly, Teijin received a waiver in 2001. But other firms such as Kolon still face this barrier in competing for a substantial portion of para-aramid sales in the United States.

E. DUPONT'S EXCLUSIONARY CONDUCT

- 28. Demand for para-aramid fibers was at an all-time high and supply was low when Kolon entered the para-aramid market in 2006. The arrival of Kolon and its consequent threat to DuPont's well-established para-aramid monopoly greatly concerned DuPont. Kolon's para-aramid fiber had similar if not superior tensile strength and quality compared to DuPont's Kevlar. In addition, Kolon's para-aramid product was more reasonably priced than DuPont's Kevlar. Despite its high quality and low price, Kolon has garnered a mere .87% of the U.S. para-aramid market to date.
- 29. Over the past three years, for example, DuPont committed various high volume U.S. para-aramid fiber buyers to multi-year supply agreements that required the customer to purchase from 80% to 100% of the customer's requirements from DuPont. The agreements prohibit disclosure of the terms to third parties.
- 30. Some but not all of the supply agreements contain "meet or release" provisions that require the customer to provide written evidence of competitive offers to DuPont and give DuPont the sole option to fulfill the supply. Thus DuPont has an absolute right under the supply agreement to preempt new entrants like Kolon from supplying the customer. The provision also gives DuPont competitive information and a competitive advantage not available to Kolon. While the customer must disclose Kolon's terms to DuPont, the customer cannot disclose DuPont's terms to Kolon, rendering it impossible to effectively compete for the customer's business. The lack of ability to effectively compete is illustrated by the fact that various key customers refuse even to deal with Kolon while under supply agreement with DuPont.

- 31. DuPont's supply agreements effectively exclude Kolon from competition for substantial or total supply to high volume para-aramid purchasers under contract with DuPont. The agreements therefore remove substantial supply opportunities from competition and limit both the overall customers and volumes for which Kolon can compete.
- 32. The exclusionary impact of the supply agreements is compounded, moreover, by DuPont's use with the highest volume purchasers in the most important commercial sustainable para-aramid categories. For example, DuPont committed industry leading U.S. producers of optic fiber to supply agreements as well as one of the largest U.S. branded tire manufacturers. Accordingly, DuPont has not only limited the overall volume of para-aramid supply available to competition, but has also severely limited Kolon from competition for the most important customers in categories needed to gain a foothold for effective competition to DuPont.
- 33. The cumulative impact of DuPont's supply agreements has severely restricted access to high volume U.S. customers in key commercial areas, relegating Kolon as a new entrant to sales opportunities below a threshold needed to effectively enter and compete in the United States. The supply agreements erect unnatural, additional barriers to entry that have unnecessarily and actually restricted Kolon from competition, strengthening and prolonging DuPont's monopoly power in the United States.
- 34. The depressed supplier acceptance caused by DuPont's long-term supply arrangements has reduced Kolon's sales volume and consequent market share to a level significantly lower than it would have been in the absence of these arrangements. Kolon is forced to operate in a smaller subset of overall U.S. suppliers, thereby stunting its competitive

viability. To date, Kolon has .87% share of the U.S. para-aramid fiber market. DuPont, by contrast, upon information and belief holds over 70% of the U.S. para-aramid fiber market.

- 35. Because DuPont's supply contracts severely restricted access to customers and preclude effective competition, DuPont's conduct has had a direct, substantial and adverse effect on competition. And DuPont's anticompetitive conduct has allowed it to control output and increase prices for para-aramid fiber in the United States.
- 36. DuPont's anticompetitive conduct has also caused substantial harm and damage to Kolon. Kolon has been severely damaged through, *inter alia*, lost sales and profits, higher costs and loss of good will.
- 37. Absent the supply arrangements, Kolon could have had an opportunity to compete for high volume customers in critical sustainable use categories necessary to gain a threshold level of sales to effectively enter the United States. By precluding Kolon from competition for these customers when demand for para-aramid fibers has significantly increased and supply is low, DuPont's conduct has constrained the only potential entrant to the United States in decades from effectively entering the market, reducing if not practically eliminating additional competition, as well as preserving and growing DuPont's monopoly position. Today in the United States DuPont continues to control both price and output. The price of para-aramid fiber remains high, demand is high and supply is low.

FIRST CAUSE OF ACTION

UNLAWFUL MONOPOLIZATION IN VIOLATION OF 15 U.S.C. § 2

38. Kolon realleges and incorporates by reference each of the paragraphs of the Amended Counterclaim as though fully set forth herein.

- 39. DuPont has monopoly power in the U.S. market for para-aramid fiber. It has a dominant share of sales in the relevant para-aramid market and has excluded competition and controlled price.
- 40. DuPont has maintained and furthered its monopoly power through exclusionary, predatory, and unlawful business conduct, as opposed to superior product, business acumen, or historic accident. The long-term supply contracts discussed above strengthen, protect and prolong DuPont's monopoly power by eliminating access to U.S. customers and erecting unnatural entry barriers that unnecessarily exclude competition. These supply agreements present the paradigm of a firm with market power in a market with high entry barriers preserving its market share on the basis of something other than efficiency, and are by definition unjustified.
- 41. These acts constitute the willful acquisition and maintenance of monopoly power, which has actually and effectively excluded Kolon from the market, consequently lessening competition for supply to purchasers of para-aramid fiber in the United States and ultimately American buyers and consumers, in violation of § 2 of the Sherman Act.

SECOND CAUSE OF ACTION

ATTEMPTED MONOPOLIZATION IN VIOLATION OF 15 U.S.C. § 2

- 42. Kolon realleges and incorporates by reference each of the paragraphs of the Amended Counterclaim as though fully set forth herein.
- 43. DuPont has engaged in predatory conduct with a specific intent to monopolize the U.S. market for para-aramid fiber with a dangerous probability of success.

- 44. DuPont's long-term supply contracts severely restrict access to key U.S. paraaramid purchasers necessary to gaining threshold sales required to effectively compete in the United States. And DuPont's market share, the ongoing U.S. supply shortage and high U.S. prices indicate a dangerous probability of success.
- 45. DuPont's conduct has severely restricted Kolon's access to substantial U.S. paraaramid purchasers, reduced Kolon's sales and market share, prevented Kolon from mounting the scale necessary to effectively enter the U.S. market and reduced competition in the U.S. paraaramid market.

PRAYER FOR RELIEF

WHEREFORE, Kolon respectfully requests the following relief:

- 1. That the Court award actual damages sustained by Kolon in an amount to be proved at trial;
 - 2. That the Court treble these damages as required by statute, 15 U.S.C. § 15(a);
- 3. That the Court grant preliminary and permanent injunctive relief enjoining DuPont, its agents, officers, employees, representatives, successors, assigns, attorneys and all other persons and entities acting for, with, by, through, or under authority from DuPont, or in concert or participation with DuPont, and each of them, from entering into long-term supply agreements for para-aramid sales in violation of Section 2 of the Sherman Act;
- 4. That the Court award attorneys fees to Kolon as provided by Clayton Act Section 4, 15 U.S.C. § 15, together with costs of suit and pre-judgment and post-judgment interest at the maximum rate permitted by law; and
 - 5. That the Court award such other relief as this Court may deem just and proper.

DEMAND FOR JURY TRIAL

Pursuant to the Seventh Amendment and Fed. R. Civ. P. 38(b), Defendant and Counterclaimant Kolon hereby demands trial by jury of all issues triable of right by a jury.

| Dated: August 31, 2009 | By: | /s/ |
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CERTIFICATE OF SERVICE

I here certify that on the 31st day of August, 2009, I electronically filed the foregoing with the Clerk of Court using the CM/ECF system, which will then send a notification of such filing (NEF) to the following:

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